

CLAIMS AMENDED ON 1 APRIL, 2004

1. A process for preparing conjugated linoleic acid by microorganisms, **characterized** by hydrolyzing oat fat and isomerizing the linoleic acid released in the hydrolysis into conjugated linoleic acid by the microorganisms.
2. A process according to claim 1, **characterized** in that the grain is untreated oat, pretreated oat or an oat fraction.
3. A process according to claim 1 or 2, **characterized** in that the fat hydrolysis is caused by the enzyme activity of oat.
4. A process according to claim 1 or 2, **characterized** in that the fat hydrolysis is carried out by adding external enzyme activity.
5. A process according to any one of claims 1 to 4, **characterized** in that isomerization is carried out by a beneficial bacterium (bacteria).
6. A process according to claim 5, **characterized** in that the beneficial bacterium is a propionic acid bacterium.
7. A process according to claim 6, **characterized** in that the propionic acid bacterium is a strain belonging to the species *Propionibacterium freudenreichii*, preferably a strain belonging to its subspecies *Propionibacterium freudenreichii* ssp. *freudenreichii* or *Propionibacterium freudenreichii* ssp. *shermanii*.
8. A process according to claim 7, **characterized** in that the propionic acid bacterium is *Propionibacterium freudenreichii* ssp. *shermanii* JS, DSM 7067.
9. A process according to any one of claims 1 to 8, **characterized** in that isomerization is carried out at a pH of about 6.5 to 9.5.
10. A process according to claim 9, **characterized** in that isomerization is preferably carried out at a pH of about 7.0 to 9.0, more preferably at a pH of about 8.0 to 8.5.
11. A process according to any one of claims 1 to 10, **characterized** in that the hydrolysis and isomerization steps are carried out consecutively.
12. A process according to any one of claims 1 to 10, **characterized** in that the hydrolysis and isomerization steps are carried out in parallel.

13. A process according to any one of claims 1 to 12, **characterized** in that the preparation of conjugated linoleic acid occurs in connection with the preparation of a food product.

5 14. A process according to any one of claims 1 to 13, **characterized** in that mainly cis-9, trans-11 isomer of conjugated linoleic acid is formed therein.

10 15. A process according to any one of claims 1 to 14, **characterized** in that conjugated linoleic acid is fixed to solids by adjusting the pH of the reaction mixture to about 3 to 9, preferably to a value lower than 7.0, most preferably to about 4 to 6.

16. A process according to any one of claims 1 to 15, **characterized** in that conjugated linoleic acid is isolated from the reaction broth and possibly dried.

15 17. A process according to any one of claims 1 to 15, **characterized** in that conjugated linoleic acid, bacterial cells and the oat material used as starting material, which is preferably oat material are concentrated and possibly dried.

20 18. A process according to claim 17, **characterized** in that linoleic acid, bacterial cells and oat material used as the starting material are recovered, concentrated and lyophilized.

19. Oat for use in the preparation of conjugated linoleic acid.

20. A process for preparing conjugated linoleic acid from linoleic acid, **characterized** in that oat is used as the source of linoleic acid.